

REMARKS/ARGUMENTS

Reconsideration of the present application is respectfully requested. Claims 2, 7, 8, and 13-16 have been canceled. Claims 1, 5, 9, and 11 have been amended and claims 18 and 19 have been newly added. Therefore, claims 1, 3-6, 9-12, and 17-19 are presently pending, with claim 1 being the sole independent claim.

In the Office Action dated November 1, 2007, claims 1, 3, 4, and 17 are rejected under 35 U.S.C. § 112, first paragraph, as based on a disclosure which is not enabling. In particular, the "pressure time" is asserted to be critical or essential to the practice of the invention, and the claims are rejected for not reciting "pressure time." Independent claim 1 has been amended herein to recite the step of treating the material presenting "a pressure time defined between the start of pressure buildup and decompression, said pressure time being at least 300 sec." Therefore, Applicant respectfully requests that the rejection be withdrawn.

Also in the pending Action, Claims 1, 3, and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,577,646 to Ziehn (the "Ziehn '646 patent"). Claims 2 and 5-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Ziehn '646 patent as applied to claims 1, 3, and 4 above, and further in view of U.S. Patent No. 4,289,148 to Ziehn (the "Ziehn '148 patent"). However, Applicant respectfully submits that none of the prior art references of record, when considered singly or combination, show or suggest the process recited in the claims.

Turning initially to the claims, claim 1 recites a process for enhancing the filling capacity of tobacco material or tobacco additional material, wherein the material has an initial moisture of 10-30%. The process includes the steps of treating the material within a pressure vessel

with a treatment gas selected from the group consisting of nitrogen, argon, and mixtures thereof at pressures of 400 to 1,000 bar followed by a continuous decompression; and subsequently thermally post-treating the discharged material, wherein during the process the filling density of the material in the pressure vessel is greater than 0.2 kg/dm^3 . The step of treating the material presents a pressure time defined between the start of pressure buildup and decompression, said pressure time being at least 300 sec.

The process recited in claim 1 enables a method for increasing the filling capacity of tobacco with several advantages. For example, the recited process permits the use of an elevated tobacco filling density, i.e., a greater charge of tobacco in a predetermined treatment vessel, to achieve a desired enhancement in tobacco filling capacity. Moreover, with the recited density levels and a pressure time of at least 300 seconds, a surprisingly and unpredictably large increase in filling capacity is provided: "Surprisingly, it has been found in fact that, contrary to the teaching from DE 29 03 300 C2, in the range of high filling densities, the time of action of the compressed gas does exert a considerable effect on the resulting filling capacity of the expanded tobacco material." (Translation; p. 2, L 35; p. 3, L 1).

Turning to the prior art references of record, the Ziehn '646 patent discloses a process for improving the fillability of tobacco by introducing tobacco into one of a series of autoclaves 1-12. The tobacco is cooled during the treatment process by a treatment gas. In the disclosed embodiment, 30 kg of tobacco is treated within a 200 liter autoclave up to a pressure of 750 bar. The pressure is then removed and the tobacco is heat treated.

The Ziehn '646 patent fails to show or suggest the process as claimed in independent claim 1. For example, the Ziehn '646 patent fails to show or suggest a process wherein during the process the filling density of tobacco material in a pressure vessel is greater than 0.2 kg/dm^3 . Instead, the Ziehn '646 patent discloses a tobacco treating process with tobacco having a filling density of 0.15 kg/dm^3 (30 kg/200 liters). The Ziehn '646 patent also fails to show or suggest the step of treating material that presents a pressure time defined between the start of pressure buildup and decompression, with the pressure time being at least 300 sec.

It has been asserted that the limitation of the filling density of tobacco material in a pressure vessel being greater than 0.2 kg/dm^3 , while not expressly disclosed by the Ziehn '646 patent, can be found through routine experimentation and that the process as claimed in claim 1 is therefore obvious based on the Ziehn '646 patent. However, Applicant respectfully submits that a *prima facie* case of obviousness has not been established.

As stated by the Federal Circuit: "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (M.P.E.P. § 2142 *citing* *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). When the prior art fails to teach or suggest all of the claim limitations, "Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art" (M.P.E.P. § 2141(III)). In the present Action, there is no explanation as to why one skilled in the art would experiment by selecting a filling density outside of the known ranges, particularly to achieve an enhanced filling capacity. On the other hand, the teachings in the prior art provide an explanation

for why one skilled in the art would not pursue such experimentation. **In particular, the prior art teaches that increasing the filling density generally produces "lower filling capacities of the expanded tobacco material." (Translation; p. 2, L 22-28).**

The Ziehn '148 patent is cited for its asserted disclosure of a tobacco treatment step that presents a pressure time defined between the start of pressure buildup and decompression, with the pressure time being at least 300 sec. The Ziehn '148 patent also fails to show or suggest the process as claimed in independent claim 1. Similar to the Ziehn '646 patent, the Ziehn '148 patent fails to show or suggest a process during which the filling density of tobacco material in a pressure vessel is greater than 0.2 kg/dm³.

While the Ziehn '148 patent teaches a range of action time from one (1) minute to ten (10) minutes, Applicant respectfully submits that combining the Ziehn '646 patent with the teachings of the Ziehn '148 patent does not establish a *prima facie* case of obviousness. Again, "there must be some articulated reasoning with some rational underpinning" in order to sustain a *prima facie* case of obviousness. (M.P.E.P. § 2142 *citing* In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)). It is assertedly obvious for one of ordinary skill in the art to increase the pressure time to increase the filling capacity, because the Ziehn '148 patent discloses an increase in filling capacity (from 62% to 65%) as action time increases (from 1 to 10 minutes). However, Applicant submits that the Examiner's explanation concerning the obviousness rejection misinterprets the teachings of the present application and, therefore, does not provide a rational basis for the rejection. Specifically, the Examiner identifies a filling capacity increase in Table 4 associated with the difference between process variants (ii) and (iii), i.e., 73% to 74%. Applicant notes that this comparison of process

variants is associated with a *decrease* in pressure time. On the other hand, a comparison of process variant (i) with a 3 minute pressure time and process variant (iii) in Table 4 yields an increase in filling capacity from 65% to 74%, i.e., a 9% increase, with an associated *increase* in pressure time from 3 to 8 minutes. Therefore, Applicant submits that the Examiner's reasoning is deficient because the Ziehn '148 patent describes an increase in filling capacity that is insubstantial when compared with the 9% increase in filling capacity described in the present application.

Furthermore, it would simply not be predictable for one skilled in the art to arrive at a process that uses elevated filling densities and increased pressure time to achieve enhanced filling capacity by combining the teachings of the Ziehn '646 patent with the teachings of the Ziehn '148 patent concerning an action time that ranges from one to ten minutes. Importantly, as discussed above, neither the Ziehn '646 patent nor the Ziehn '148 patent show or suggest the use of high filling densities, e.g., greater than 0.2 kg/dm^3 , to significantly improve filling capacity. To the contrary, Applicant has surprisingly discovered that the combination of high filling densities along with increased pressure time provides "a considerable effect on the resulting filling capacity of the expanded tobacco material." (Translation; p. 2, L 35; p. 3, L 1). In view of the foregoing, even if the Ziehn '646 patent is combined with the teachings of the Ziehn '148 patent, such a hypothetical combination fails to arrive at the claimed invention.

However, even if a *prima facie* case of obviousness is established, the *prima facie* case may be rebutted "by showing that the art, in any material respect, teaches away from the claimed invention." (M.P.E.P. § 2144.05 (III)). For instance, the Ziehn '148 patent itself states that "the time period during which the necessary pressure has been built up has nearly no influence on

the improvement of the filling capacity." (Specification; Col. 2, L39-45). Thus, one skilled in the art would view the Ziehn '148 patent as teaching away from the use of a pressure time of at least 300 seconds in order to achieve an enhanced filling capacity.

Applicant respectfully submits that all of the references of record, when considered singly or in combination with any of the other references of record, fail to disclose or suggest the use of the process recited in the pending claims.

In view of the foregoing, Applicant submits that the independent claim 1 recites a process not shown or suggested in the prior art references of record. Claims 1, 3-6, 9-12, and 17-19 depend either directly or indirectly from claim 1 and recite additional features of the invention not shown or suggested by the prior art.

Therefore, the present application should now be in condition for allowance and such allowance is respectfully requested. Should the Examiner have any questions, please contact the undersigned at (800) 445-3460.

A 2-month Petition for Extension of Time accompanies this Amendment, along with authorization to charge \$460.00 to the undersigned's Deposit Account No. 19-0522 for the petition fee set forth in 37 C.F.R. § 1.17. The Commissioner is further authorized to charge any additional fees associated with this communication or credit any overpayment to said Deposit Account.

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Respectfully submitted,

HOVEY WILLIAMS LLP

By:



Andrew G. Colombo, Reg. No. 40,565
2405 Grand Boulevard, Suite 400
Kansas City, Missouri 64108
(816) 474-9050

ATTORNEYS FOR APPLICANT